MATHEMATICS MAGAZINE

Index to Volume 31 September-October, 1957 – May-June, 1958

Articles by Title

A Correction and Generalization of Neustadt's Law – W. W. Funkenbusch. . . 159
A Determinant Formula for Higher Order Approximation of Roots – J. M. Wolfe 197
A Finite Sequence and a Card Trick – Ali R. Amir-Moéz 25
A Method for Finding the Real Roots of Cubic Equations by Using the Slide Rule – Louis L. Pennisi 211
A Note Concerning Homogeneous Polynomials – J. C. Morelock and N. C. Perry 75
A Note on Computation with Approximate Numbers – N. C. Perry and J. C. Morelock 155
A Number System With an Irrational Base – George Bergman 98
A Special Case of a Prime Number Theorem – R. Lariviere. 281
A Symbolic Method for Finding Integrals of Linear Difference and Differential-Difference Equations – K. L. Cooke. 121
A Theorem Concerning the Bernstein Polynomials – H. W. Gould 259
Abstract Structure of Inequalities – A. B. Soble 179
An Analogue to Clifford's Chain – Katsutarô Kobayashi 133
Angle of Inclination and Curvature – David Gans 31
Arithmetical Congruences with Practical Applications – Carol Law 221
Comment on the paper "*Long Short Lines*" – L. B. Robbins 158
Comment on the paper "*Conic Sections*" – Paul D. Thomas 157
Comment on the paper "*On a Certain Problem in Mechanics*" – Philip B. Jordain 158
Cartalgebra 254
Certain Non-factorable Polynomials – Doyne Holder 80
Combinatorial Derivations of Two Identities – Donald A. Steinberg 207
Critical Curves in Seismic Exploration – H. G. Helfenstein 85
Knocking a Cone Into a Cocked Hat – Daniel B. Lloyd 201
Linear Diophantine Equations – Arthur B. Brown 215
Mike Wallace Interviews George Bergman 282
Multiple Numbers – John A. Tierney and John Tyler 27
n-Groups with Identity Elements – Donald W. Robinson 255
Normal Curve Areas and Geometric Transformations – David Gans 205
Note on the Derivatives of the Legendre Polynomials – Gideon Peyser 210
Notes On Circular And Hyperbolic Functions – William S. McCulley 33
Numbers and Number Systems – L. A. Ringenberg 265
On a Characterization of Orthogonality – Waleed A. Al-Salam 41
On Natural Boundaries of a Generalized Lambert Series – Francis Regan and Charles Rust 45
On Popular Methods and Extant Problems in the Solution of Polynomial Equations – Donald Greenspan 239
On the Local Uniqueness Problem for Periodic Surface Waves of Permanent Type in a Channel of Infinite Depth – D. H. Hyers and J. A. Ferling . . . 61
On the Polar Projection with Respect to Normal Curves – Masaru Inagaki . . 141
Orthogonal Tetrahedron – Sahib Ram Mandam 127
Principle of Induction and a Sequence of Generosities – A. R. Amir-Moez . . . . . back of contents, Jan.-Feb.
Solution of Triangles on the Slide Rule – V. C. Harris 95
Solving Differential Equations Without Complex Numbers – Michael J. Pascual 93
Some Operational Methods in the Calculus of Finite Differences

Joseph Talacko 15
Student Progress – Samuel S. Enser 154
Test for Divisibility by the Use of a Remainder Function – N. A. Draim ... 137
The Coefficients of $\frac{\cosh x}{\cos x}$ and a Note on Carlitz's Coefficients of $\frac{\sinh x}{\sin x}$ –
J. M. Gandhi 185
The Derivatives of the Trigonometric Functions – M. J. Pascual 39
The Lucky Number Theorem – D. Hawkins and W. E. Briggs 81
The Midpoint Method of Numerical Integration – Preston C. Hammer 193
The Random Sieve – David Hawkins 1
You Can't Divide by Zero (cartoon) 92

Articles by Authors

Al-Salam, Waleed A., On a Characterization of Orthogonality 41
Amir-Moez, A. R., Principle of Induction and a Sequence of
Generosities ..... back of contents, Jan.-Feb.
A Finite Sequence and a Card Trick 25
Bergman, George, A Number System With an Irrational Base 98
Brown, Arthur B., Linear Diophantine Equations 215
Cooke, K. L., A Symbolic Method for Finding Integrals of Linear Difference
and Differential-Difference Equations 121
Draim, N. A., Test for Divisibility by the Use of a Remainder Function ... 137
Enser, Samuel S., Student Progress 154
Funkenbusch, W. W., A Correction and Generalization of Neustadt's Law .. 159
Gould, H. W., A Theorem Concerning the Bernstein Polynomials 259
Gandhi, J. M., The Coefficients of $\frac{\cosh x}{\cos x}$ and a Note on Carlitz's
Coefficients of $\frac{\sinh x}{\sin x}$ 185
Gans, David, Angle of Inclination and Curvature 31
Normal Curve Areas and Geometric Transformations 205
Greenspan, Donald, On Popular Methods and Extant Problems in the Solution
of Polynomial Equations 239
Hammer, Preston C., The Midpoint Method of Numerical Integration 193
Harris, V. C., Solution of Triangles on the Slide Rule 95
Hawkins, D., The Random Sieve 1
and W. E. Briggs, The Lucky Number Theorem 81
Helfenstein, H. G., Critical Curves in Seismic Exploration 85
Holder, Doyne, Certain Non-factorable Polynomials 80
Hyers, D. H. and J. A. Ferling, On the Local Uniqueness Problem for Periodic
Surface Waves of Permanent Type in a Channel of Infinite Depth 61
Inagaki, Masaru, On the Polar Projection with Respect to Normal Curves .. 141
Jordain, Philip B., Comment on the paper *"On a Certain Problem in
Mechanics"* 158
Kobayashi, Katsutarô, An Analogue to Clifford's Chain 133
Lariviere, R., A Special Case of a Prime Number Theorem 281
Law, Carol, Arithmetical Congruences with Practical Applications 221
Lloyd, Daniel B., Knocking a Cone Into a Cocked Hat 201
Mandam, Sahib Ram, Orthogonal Tetrahedron 127
McCulley, William S., Notes on Circular and Hyperbolic Functions 33
Morelock, J. C. and N. C. Perry, A Note Concerning Homogeneous Polynomials 75
Pascual, M. J., Solving Differential Equations Without Complex Numbers .. 93
The Derivatives of the Trigonometric Functions 39
Pennisi, Louis L., A Method for Finding the Real Roots of Cubic Equations
by Using the Slide Rule 211

Perry, N. C. and J. C. Morelock, A Note on Computation with Approximate Numbers 155
Peyser, Gideon, Note on the Derivatives of the Legendre Polynomials . . . 210
Regan, Francis and Charles Rust, On Natural Boundaries of a Generalized Lambert Series 45
Ringenberg, L. A., Numbers and Number Systems 265
Robbins, L. B., Comment on the paper *"Long Short Lines"* 158
Robinson, Donald W., n-Groups with Identity Elements 255
Robinson, Lewis Bayard, Calculation of a Complete System of Tensors with the Aid of Symbolic Multiplication. 5
Soble, A. B., Abstract Structure of Inequalities 179
Steinberg, Donald A., Combinatorial Derivations of Two Identities 207
Talacko, Joseph, Some Operational Methods in the Calculus of Finite Differences 15
Thomas, Paul D., Comment on the paper *"Conic Sections"* 157
Tierney, John A. and John Tyler, Multiple Numbers 27

Problems and Questions

Contributors

Numbers refer to pages. Bold type indicates a problem solved and solution published; Italics, a problem solved but solution not published; ordinary type, a problem proposed.

Al-Salam, W. A. *117*, **165**, **232**, *233*, **289**
Anning, Norman *115*, 164
Bankoff, Leon **53**, *113*, *115*, *170*
Beiner, Felix *287*
Bergman, George *169*, 230, **233**, *287*
Bissinger, Barney 51, 164, *236*
Breault, D. A. *53*, **113**, *163*, *165*, *170*, **171**, *230*, *234*, *236*, 285, *287*, *288*
Brendan, T. *236*, *287*, *288*
Brown, J. L. (Jr.) **171**
Bruschman, R. G. 229
Calabi, Eugenio **53**
Cappel, K. L. **56**
Carlitz, L. **118**, **165**
Cartmell, David J. *53*
Carver, Walter B. 163, *169*, **230**, *232*, *233*, *234*
Chaffin, M. *287*
Clawson, J. W. *54*, *56*, *287*, *288*, *293*
Coffman, R. T. *53*, 111, *287*, *289*
Conkling, R. M. **293**
Court, N. A. *54*
Daniel, Edward **286**
Demir, Huseyin *54*, *56*, *57*, **117**, 228, *231*, *232*, *233*, *236*
Dodes, Irving A. *169*
Duggal, K. L. *164*
Duncan, Dewey *56*
Eves, Howard *53*, *54*, *55*, **55**
Flanders, Harley **114**
Gandhi, H. M. *56*
Gandhi, J. M. 51, *164*, *173*, *232*, **232**, *234*, 286
Gehman, Harry M. 169, **287**, *288*
Gold, Ben K. 51, **232**, **233**
Gopalan, M. N. 163, *164*
Gregory, A. S. **173**
Heck, Grant 285
Howell, J. M. 112, *291*
Huntington, D. F. 229
Johnson, Harold *171*
Karst, Edgar **293**
Kearns, D. A. 229, *232*
Keeping, E. S. *113*, *114*

Kiltie, R. B. 112, **292**
Klamkin, M. S. *118*, 229
Konhauser, J. D. E. *232*, **233**, *234*, *235*, *236*, **288**, *289*, *290*, *291*, *292*, *293*
Kravitz, Sam *230*, **287**
Kravitz, Sidney 51, *230*
Krick, M. S. 111, *288*
Leifer, H. R. *169*, *287*
Malmquist, Karl O. (Jr.) **170**
Means, James H. 285, *287*
Michalup, Erich *55*, 112, *287*, *293*
Morduchow, M. *232*, *233*, **235**, *288*, **290**
Moser, Leo 112, *113*, *290*
McCawley, James (Jr.) 285
McLean, Ray E. *289*
Ng, Wahin *55*
Ogilvy, C. S. **115**
Pai, B. K. R. *52*, *53*, **54**. *55*
Painter, James A. **55**
Parker, F. D. *169*, *171*, *232*, *233*, *287*
Parrish, Gene B. *52*, **52**, *113*, *115*
Pascual, M. J. **230**, *232*, *233*, *234*, *235*, *236*, *287*, **288**, **291**
Pembroke, M. *170*
Pepper, P. M. 164, **174**
Pinzka, Charles F. *287*, **288**, *290*
Piza, P. A. *55*, 286
Pleijel, Arne *169*, *232*, *233*, **236**
Rajagopal, A. K. 51, *52*, *54*, *171*, *232*, *233*, *234*, *236*
Ringenberg, L. A. **114**, **164**, *232*, *233*, **235**, *287*, *289*, *290*
Rogers, C. A. **168**, *171*
Ruderman, H. D. *169*, *231*, *232*, *233*, *234*, *235*
Russell, William F. *233*
Schor, Harry *169*
Shafer, R. E. 228
Smith, J. T. *288*
Starke, E. P. *169*, *170*, *231*, **233**, *235*
Steinberg, D. A. 111, *113*
Steinberg, Barbara *287*
Stephanie, Sister M. **53**
Thebault, Victor *170*, 228
Thomas, P. D. 51, *233*, **233**, *287*, *288*, *291*
Thoro, Dmitri *233*, **235**
Trigg, C. W. *112*, **114**, *115*, **169**, 228, **229**, *231*, 285, *288*, *289*, **290**
Wagner, Robert J. *236*
Wang, Chih-yi 51, **52**, *53*, *54*, *55*, **113**, *115*. **116**, *118*, 163, *169*, *172*, **172**, *231*, *233*, **233**, *234*, *235*, *236*, *289*, **292**
Woods, Dale *171*, *288*, *289*, *292*
Yarbrough, Billy E. *288*

Solutions

The page on which a solution appears is in the parentheses following the number of the problem.

292 (52), 293 (53), 294 (53), 296 (54), 297 (55), 298 (56), 289 (112), 299 (113), 300 (113), 301 (114), 302 (115), 303 (116), 304 (117), 305 (118), 306 (164), 307 (165), 309 (169), 310 (170), 311 (172), 312 (178), 313 (229), 314 (230), 315 (232), 316 (233), 317 (233), 318 (234), 319 (235), 320 (286), 321 (288), 322 (289), 323 (289), 324 (290), 325 (291), 326 (292)

Quickies

204, 205, 206, 207, 208, 209, 210, (57); 211, 212, 213, 214, 215, (119); 216, 217, 218, 219, (177); 220, 221, (236); 222, 223, (237); 224, 225, (294)

Trickies

32, 33, (294)